claims and Appendix B is a clean copy of the amended claims.

**REMARKS**

Claims 1-6 are presently pending in the captioned application with claims 1 and 2 being amended.

Claim 1 now recites a surface layer and an underlayer and provides antecedent support for an "amorphous component". Additionally, claims 1 and 2 now recite a ratio (a) and (b) from 5 to 62.5 wt%. Support for the amendments can be found at page 3, lines 22-24 and page 4, line 5, page 18, lines 14-23 and at page 4, lines 11-21, respectively. No new matter within the meaning of §132 is added by any of the amendments.

Additionally, Applicant proffers an amended specification reflecting amendments changing a surface layer (A) formulation to a weight percent in the disclosure and Table 2.

Accordingly, Applicant respectfully requests the Examiner to enter the amendments, reconsider and allow all claims pending in this application in view of the following arguments.

## 1. Rejection of Claims 1-6 under 35 U.S.C. §112, second paragraph

The Office Action rejects claims 1-6 under 35 U.S.C. §112,

second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action states:

> (a) At line 4, the claim recites "the surface layer", however, given that there is insufficient antecedent basis for this term in the claims, it is unclear whether elastomer (B) is laminated to the surface layer of elastomer (A) or whether elastomer (A) is the surface layer of the laminated material.

Applicant respectfully traverses the rejection because presently pending claim 1 now recites a surface layer comprising a polyolefinic thermoplastic elastomer (A) and an underlayer comprising a polyolefinic thermoplastic elastomer (B). Therefore, there is antecedent basis for both a surface layer and an underlayer wherein the elastomer (A) is the surface layer.

The Office Action then states:

> (b) At lines 6-7 and again at lines 10-11, the claim recites the limitation "the amorphous component", however given that there is insufficient antecedent basis for this term in the claims and given that the specification does not clearly define the term, it is unclear what is meant to be encompassed by the team, "the amorphous component".
>
> However, it appears that the data presented in the tables do not incorporate the polypropylene component in terms of these ratios though polypropylene is similar to propylene-

> ethylene which is listed by the Applicant as an example of a "hydrocarbon type rubbery material".

Applicants respectfully traverse the rejection because presently pending claim 1 now recites "**an** amorphous component" rather than "**the** amorphous component" thereby providing antecedent support for the term.

Regarding the Office Action's assertion that the tables "do not incorporate the polypropylene component . . . though polypropylene is similar to propylene ethylene", Applicants note that **poly**propylene is not similar to propylene-ethylene. In particular, one of ordinary skill in the art clearly knows that propylene-ethylene copolymer is a random copolymer of ethylene and propylene, which is rubbery and noncrystalline material in nature and used for toughening of other polymers.

On the other hand, polypropylene is a **non**-rubbery resin prepared from catalytically active propylene having an isotactic replacement of hydrogen atom by a methyl group on alternate carbon atoms in the main chain. Clearly, polypropylene is not an amorphous component and is therefore properly excluded from the tables and claims.

The Office Action then states:

> (c) At lines 6-8 and 10-11, the claim includes parenthetic expressions which render the claim indefinite for it is

> unclear whether the limitation presented in the parenthesis is part of the claimed invention.

Applicants respectfully traverse the rejection because the presently pending claims have been amended to remove parentheticals.

The Office Action then states:

> (d) At lines 15-16, the claim recites that the ratios(a) and (b) equal "5 to 200 wt%" however these limitations are unclear given that the ratios (a) and (b) are ratios with respect to the oily softening agent to the amorphous component in elastomer (A) and (B), respectively, and hence should be expressed in terms of a value or amount of oily softening agent based on 100 wt% amorphous component, etc.
>
> (e) Claim 2 also recites similar limitations in terms of the ratios (a) and (b) which are unclear for similar reasons as discussed in item d above.

Applicants respectfully traverse both the rejection under paragraph (d) and (e) because the presently pending claims have been amended to recite ratios (a), (b), (a') and (b') of claims 1 and 2 into "62.5 wt.%" based on a 100 wt %.

No new matter is introduced by the amendments. In particular, the amendment is supported by the specification at page 4, lines 11-21 as follows:

> "The above polyolefinic thermoplastic elastomer (A) and the polyolefinic

thermoplastic elastomer (B) forming the underlayer may be manufactured by dynamically heat treating in the presence of a crosslinking agent, preferably 10 to 60 wt. parts of a polyolefin resin (X), ***30 to 70 wt. parts of an ethylene-ά-olefin-non-conjugated polyene copolymer rubber (Y)*** (or a rubber component obtained by adding there to other rubbers such as polyisobutylene, butyl rubber and propylene-ethylene copolymer) and ***5 to 50 wt. parts of an oily softening agent (Z)*** [emphasis added]"

Since the totals of (X), (Y) and (Z) is 100 parts by weight, the maximum of the ratios (a), (b), and (a') and (b') of claims 1 and 2 can be calculated by the following ratio:

$$\frac{50 \text{ (maximum of (Z))}}{50 \text{ (maximum of (Z))} + 30 \text{ (minimum of (Y))}} \times 100 = 62.5 \text{ wt.\%.}$$

Additionally, the softening agent concentration of Example 4 in Table 2 for the surface layer (A) can be calculated by the following manner:

(i) TPO-c contains 64 wt.% of EPDM and 16 wt.% of softening agent (See Table 1, page 21). Accordingly, 70 wt. parts of TPO-c of Example 4 in Table 2 contains **44.8** wt. parts of EPDM (0.64 X 70) and **11.2** wt parts of a softening agent (0.16 X 70).

(ii) The total amount of softening agent in the surface layer (A) formulation of Example 4 is 31.2 parts by weight (11.2 wt parts +

20 wt parts of softening agent post-addition = 31.2). See Table 2.

(iii) The softening agent concentration of surface layer (A) of Example 4 can therefore be calculated by the following equation:

$$\frac{31.2}{31.2 + 44.8} \times 100 = 41.\ \text{wt.\%}.$$

Clearly, support can be found in the specification for ratios (a), (b), (a') and (b') of claims 1 and 2 into "62.5 wt.%" based on a 100 wt% component.

Accordingly, Applicant respectfully submits that the amended claims as presently pending particularly point out and distinctly claim the subject matter contained therein and request reconsideration and withdrawal of the rejection.

## 2. Rejection of Claims 1-6 under 35 U.S.C. §102(b)

The Office Action rejects claims 1-6 under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 5,766,703 ("Mori et al."). The Office Action states:

> Mori et al teach an automobile weather strip (molding) or glass run channel formed by coextruding a main body made of a sulfur-vulcanizable ethylene propylene rubber (EPDM) type compound (polyolefinic thermoplastic

> elastomer) and a sealer underlying layer comprising a EPDM type compound blended with unsaturated nitrile-conjugated diene copolymer rubber NBR and hydrogenated styrene-conjugated diene copolymer rubber SBR polymer, wherein both coextruded layers may compounded with auxiliary materials such as reinforcing fillers and lubricants (oily softening agents) with disclosed examples utilizing paraffinic/process oil within the instantly claimed weight percentage and also compound polyethylene into the rubber composition as instantly claimed.

Applicants respectfully traverse the rejection because Mori et al. is not a proper 102(b) reference. In particular, Mori et al. does not teach each and every claimed limitation insofar as no disclosure relates to specific ratios relating to an amorphous component or a thermoplastic elastomer.

Turning to the rule, the Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that **each and every** element of the claimed invention be disclosed in a **single** prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be **expressly** disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

The prior art reference must also be enabling, thereby placing the allegedly disclosed matter in the possession of the public. In re Brown, 329 F.2d 1006, 1011, 241 USPQ 245, 249 (C.C.P.A. 1964).

In order to accomplish this, the reference must be so particular and definite that from it alone, without experiment or the exertion of his own inventive skill, any person versed in the art to which it pertains could construct and use it. Id. at 250.

In the present application, presently pending claim 1 recites a surface layer comprising a surface layer comprising a polyolefinic **thermoplastic** elastomer (A) and an underlayer comprising a polyolefinic **thermoplastic** elastomer (B) wherein the ratio (a) of the oily softening agent to amorphous component, satisfy the following requisites;

ratio(a) $\geq$ 0.8 X ratio (b),

ratio(a) = 5 to 62.5 wt.%, and

ratio(b) = 5 to 62.5 wt.%.

On the other hand, Mori et al. fails to teach each and every claimed limitation insofar as failing to disclose the specifically claimed ratios. Additionally, Mori et al. only relates to **thermosetting** elastomers such a ethylene propylene rubbers ("EPDM") See Mori et al. at Col 1, lines 18, 29-31, and 65. In contrast, the present invention relates to **thermoplastic** elastomers such as thermoplastic polyolefins ("TPO").

EPDM rubbers are nonpolar, hydrophobic and have a low sticking property. TPO's of the present invention, on the other hand, are

commonly used as a substrate having a low drying temperatures thereby preventing thermal deformation during curing. Both have different chemical structures and are well acknowledged in the art to be a separate classes of compounds. Clearly, TPO's are not EPDM's. Moreover, nowhere does Mori et al. teach the limitations directed to an amorphous content or that ratios effect the desirable features of the presently claimed invention.

Accordingly, Applicant respectfully submits that each and every claim limitation is not taught by Mori et al. and respectfully request the Examiner to reconsider and withdraw the 102(b) rejection.

## 3. **Rejection of Claims 1-6 under 35 U.S.C. §103(a)**

The Office Action rejects claims 1-6 under 35 U.S.C. §103 as being unpatentable over Mori et al. The Office Action states:

> The teachings of Mori eta l are discussed above. Though Mori et al do not specifically limit the amount of lubricants (oily softening agent) in the coextruded layers as instantly claimed, it would have been obvious to one have ordinary skill in the art to utilize routine experimentation to determine the optimum amount of lubricants or additives to compound into the rubber materials to provide the desired lubricating or additive property for a particular end use given that the amount is a result-effective property based on the property

of the respective additive.

Applicants respectfully traverse this rejection because all the claimed limitations have not been taught by the cited references. Even assuming *arguendo* that a *prima facie* case has been made out, the Office Action fails to provide a convincing line of reasoning that would provide any suggestion or motivation to make the claimed invention. Clearly, the lack of any convincing line of reasoning to vary the ratio of an oily softening agent in relation to an amorphous component of a thermoplastic elastomer such as a thermoplastic polyolefins ("TPO") renders the claimed invention unobvious over the cited reference.

Turning to the rule, the Federal Circuit held that a *prima facie* case of obviousness must establish: (1) some suggestion or motivation to modify the references; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all claim limitations. Amgen, Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970).

A *prima facie* case of obviousness must also include a showing of the reasons why it would be obvious to modify the references to produce the present invention. See Ex parte Clapp, 277 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). The Examiner bears the initial

burden to provide some convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings. Id. at 974.

In the present application, independent claim 1 recites a laminated material comprising:

(i) a surface layer comprising a polyolefinic thermoplastic elastomer (A) containing an oily softening agent, and

(ii) an underlayer comprising a polyolefinic thermoplastic elastomer (B) containing an oily softening agent which underlayer is laminated on the surface layer,

wherein the ratio (a) of the oily softening agent to amorphous component, or if the polyethylene is incorporated, to the total of an amorphous component and polyethylene in said thermoplastic elastomer (A) and the ratio (b) of the oily softening agent to an amorphous component, or if the polyethylene is incorporated, to the total of an amorphous component and polyethylene in said thermoplastic elastomer (B) satisfy the following requisites;

ratio(a) $\geq$ 0.8 X ratio (b),

ratio(a) = 5 to 62.5 wt.%, and

ratio(b) = 5 to 62.5 wt.%.

Nowhere does Mori et al. teach varying the ratio (a) of the

oily softening agent to an amorphous component. Moreover, there is absolutely no suggestion or motivation provided in the reference to lead one of ordinary skill to make such variations.

Even assuming *arguendo* that a *prima facie* case has been established, Applicants provide evidence of unexpected results. In particular, the claimed compositions do not exhibit stickiness as compared to the comparative examples shown in Table 2 of the specification. For example, compositions having a ratio of an oily softening agent to amorphous component falling outside the claimed limitations have undesirable characteristics. See Table 2.

In contrast, the claimed compositions unexpectedly exhibit decreased stickiness. As the court stated in In re Corkill, "a greater than expected result is an evidentiary factor pertinent to the legal conclusion of [non]obviousness". 711 F.2d 1496, 266 USPQ 1005 (Fed. Cir. 1985). Desirable non-stickiness through manipulation of an oily softening agent to amorphous component simply would not have been expected from the teachings of the prior art.

Applicants have demonstrated a significant, practical advantage over the prior art compositions. Clearly, a manipulation in ratios previously thought to be non-critical constitutes an indicia of nonobviousness that confers patentability upon

Applicant's presently claimed invention.

Accordingly, Applicant respectfully submits that the presently claimed invention is unobviousness over the cited references and respectfully request reconsideration and withdrawal of the rejections of claims 1-6 under 35 U.S.C. §103.

**CONCLUSION**

In light of the foregoing, Applicant submits that the application is now in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of the pending claims and allow the pending claims. Favorable action with an early allowance of the claims pending is earnestly solicited.

Respectfully submitted,

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